NASA TechTracS

Metrics Module Documentation

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Metrics Module Section: 008

Manual Style Conventoions

The following conventions are used throughout user documentation for easier readability:

Area or Action	Format	Example
Table Reference	A table reference is denoted by brackets before and after the table name.	[Technology]
Field Reference	A field reference is denoted by a table reference followed by the field name.	[Technology]Case Number
Values	Quotes are use to denote values.	"LAR-11001-1" [Technology]Case Number
Menu	Bold>With plain arrows> denoting the different> Levels.	From the File menu, select File > Page Setup
Button	Italics are used to denote buttons.	click the Cancel button
Methods	Methods are denoted by bold text.	TechOrgCodes
Variable	Variables are denoted by Bold Italic text.	vTTName (Which stands for the Tech Transfer Officer Name - ie "Jim Alberti")

NOTE: NASA TechTracS Expressions includes both methods and variables

Section: 008	Metrics Module

Overview Section: 008.01

Overview

Metrics consists on caclulating Commercialization Metrics, Assistance Metrics and UPN Assingments.

Features

- Find capabilities for each metric
- Recall set capabilities for each set
- HTML or Excel Commercialization Metric Report Email

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Use of the Module Section: 008.02

Use of the Module

Commercialization metrics are automatically calculated twice a month, before and after the FACS procurement data load. The FACS load normally occurs after the 15th of each month.

Commercialization metric calculation types include

Center_Total
Enterprise
Program_Office
PMC_Program
COG
3_Digit_UPN
5_Digit_UPN

Center_Total

Center_Total is the grand total metrics record for the center. There is only one record per month.

Enterprise

Enterprise metrics are calculated for each of the following NASA Enterprise's:

AST - Aerospace Technology
ES - Earch Science
FPA - Functional Program Areas
HEDS - Human Expoloration and Development of Space
OTHER - Other
SS - Space Science

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Section: 008.02 Use of the Module

Program_Office

Enterprise metrics are calculated for each of the following NASA Enterprise's:

- 0 Associate Administrator (FPA)
- 1 Headquarters Office (FPA)
- 2 Office of Safety and Mission Assurance (FPA)
- 3 Office of Life and Microgravity Science (HEDS)
- 4 Office of Space Systems Development
- 5 Office of Space Communications (FPA)
- 6 Office of Space Access and Technology
- 7 Office of Aero-Space Technology (AST)
- 8 Office of Space Science (SS)
- 9 Office of Space Flight (HEDS)
- A Office of Earth Science (ES)
- FO Functional Program Areas Other (*)
- HO HEDS Other (*)

PMC_Program

PMC_Program metrics are calculated for each record in the [PMC_Program] table. [PMC_Program] records are maintained at Agencywide TechTracS and periodically downloaded to each field center.

COG

COG metrics are calculated for each record in the [COG] table. [COG] records are maintained at Agencywide TechTracS and periodically downloaded to each field center.

3 Digit UPN

3_Digit_UPN metrics are calculated for each record 3 digit UPN in the [Program Code] table. [Program Code] records are maintained at Agencywide TechTracS and periodically downloaded to each field center.

5_Digit_UPN

5_Digit_UPN metrics are calculated for each record 5 digit UPN in the [Program Code] table. [Program Code] records are maintained at Agencywide TechTracS and periodically downloaded to each field center.

^{*} Added to NASA TechTracS for the purpose of calculating metrics for Enterprises which are made up of more than 1 program office.

mmercialization Metric	S		

Commercialization Metrics

Section: 008.03

Section: 008.03	Commercialization Metrics

List Screen Section: 008.03.01

List Screen

Using the standard NASA TechTracS list screen mechanism, this screen shows the:

[Commercialization Metrics]FY

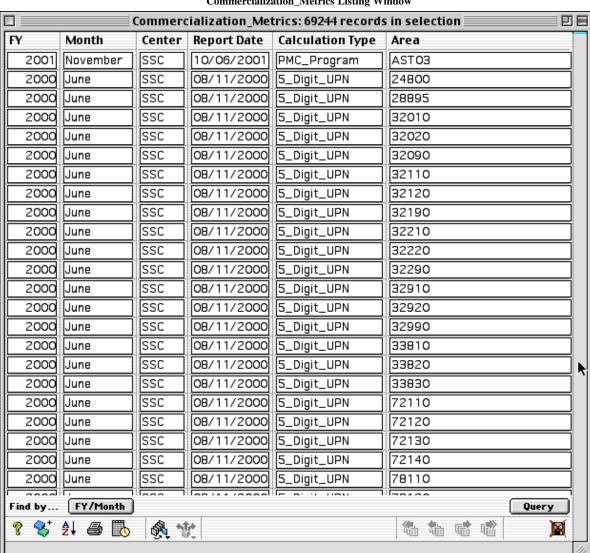
[Commercialization Metrics]Month

[Commercialization Metrics]Center

[Commercialization Metrics]Report_Date

[Commercialization Metrics]Calculation_Type

Area (displays appropriate field based on [Commercialization Metrics]Calculation_Type)

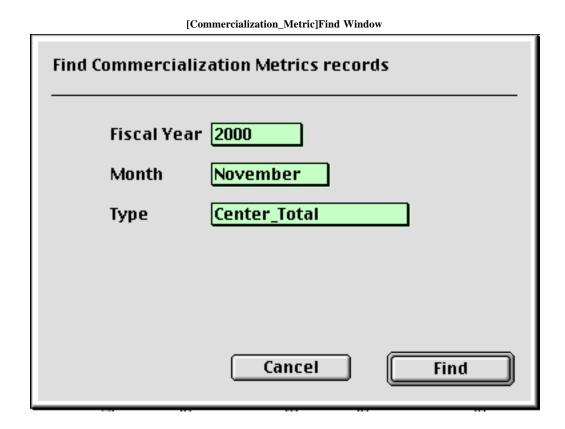


Commercialization_Metrics Listing Window

Section: 008.03.01 List Screen

Find

In addition to the standard query tools, Commercialization Metrics may be queried using the custom Find utility:



Records may be found using:

- Fiscal Year
- Month
- Type

Batch Update Routines

Calculate Center Total Only availabe to users in *DBA* group, this Batch Update Routine recalculates the Center_Total for Commercialization Metrics

Activities Baseline Screen

All 4 screens have the following common fields displayed near the top of the screen:

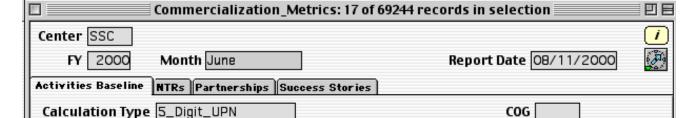
- [Commercialization_Metrics]Center
- [Commercialization_Metrics]Fiscal_Year
- [Commercialization_Metrics]Month
- [Commercialization_Metrics]Report_Date
- $\hbox{-} [Commercialization_Metrics] Calculation_Tyoe$
- [Commercialization_Metrics]Enterprise
- [Commercialization_Metrics]Program_Office
- [Commercialization_Metrics]PMC_Program
- [Commercialization_Metrics]COG

Enterprise

Program Office

PMC Program

- [Commercialization_Metrics]3_Digit_UPN
- [Commercialization_Metrics]5_Digit_UPN



Common Fields for [Commercialization_Metrics] data screen

The activities baseline screen contains the following metric calculations:

Extramural_CY_Obs
Percent_No Potential_CY_OBS
Total_Activities_Count
Contract_Reports_Received
Percent_Reporting
Activities with NTRs

Percent_Yes_Potential_CY_OBS
Percent_Unknown_Potl_CY_OBS
Activities_with_Clause_Count
Contract_Reports_Due
Activities_with_Clause_Potential
Percent with NTRs

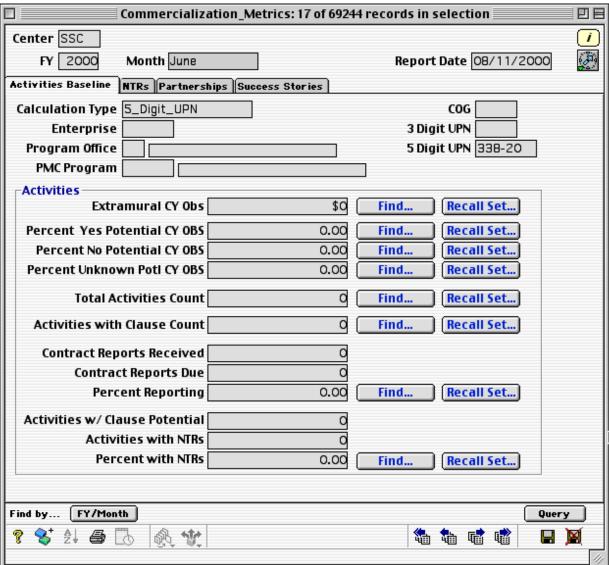
3 Digit UPN

5 Digit UPN | 338-20

Section: 008.03.02

Section: 008.03.02

Activities Baseline Screen



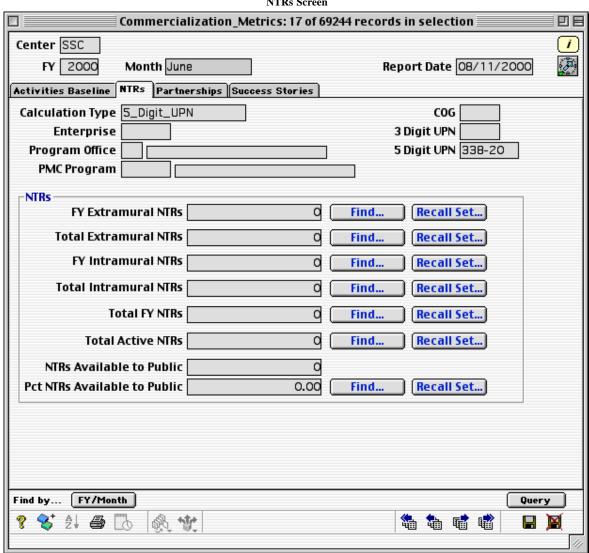
NTRs Screen Section: 008.03.03

NTRs

The NTRs screen contains the following metric calculations:

FY Extramural NTRs Total Extramural NTRs FY_Intramural_NTRs Total_Intramural_NTRs Total FY NTRs Total_Active_NTRs NTRs_Available_to_Public Pct_NTRs_Available_to_Public

NTRs Screen

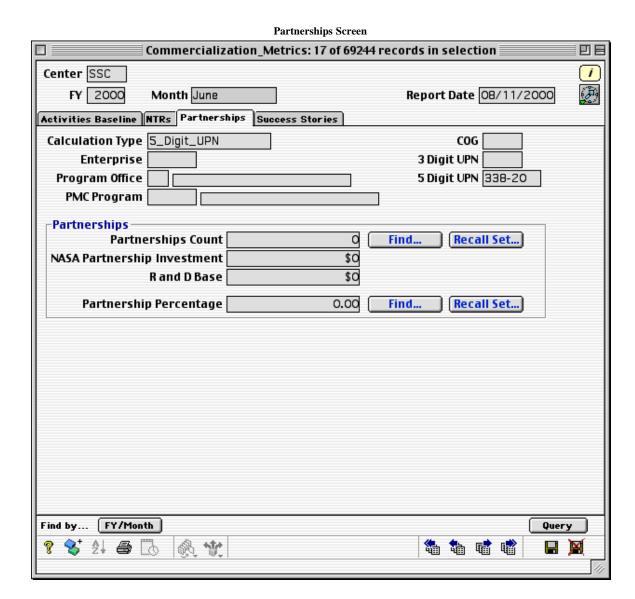


NTRs Screen Section: 008.03.03

Partnerships Screen

The NTRs screen contains the following metric calculations:

Partnerships_Count NASA_Partnership_Investment R_and_D_Base Partnership_Percentage



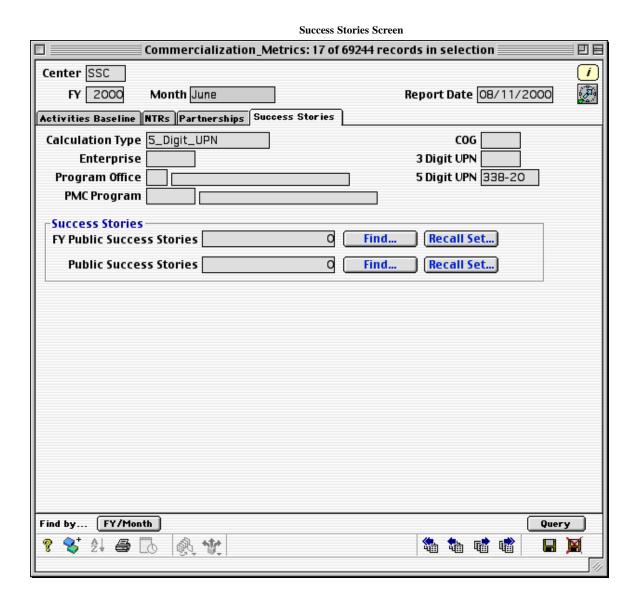
Section: 008.03.04	Partnerships Screen

Success Stories Screen Section: 008.03.05

Success Stories Screen

The NTRs screen contains the following metric calculations:

- FY_Public_Success_Stories
- Public_Success_Stories



Section: 008.03.05	Success Stories Screen

Section : 008.03.06

Reports

Reports available from [Commercialization_Metrics] include:

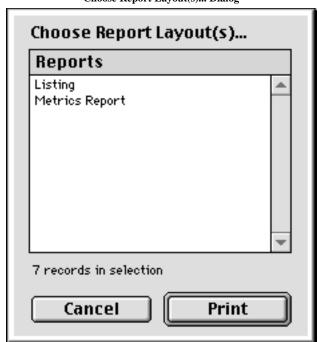
- Metrics Report Sent by Email
- Listing Report (contents of the List Window)
- Metrics Report Printed to Disk

Metrics Report Sent by Email

At each field center, the metrics report for Center_Total is automatically sent after each metric run as an enclosure to an email to any People with a related keyword of "cto_metrics_report". The Agencywide metrics report for the entire Agency is automatically sent after each metric run as enclosure to an email to any People with a related keyword of "cto_hq_metrics_report". The metrics report arrives as an html document that can be viewed in a web browser or opened with Microsoft Excel.

Listing Report

The listing is available from the Choose Report Layout(s) dialog after choosing Print. The contents of the listing window are printed on the Listing report.



Choose Report Layout(s)... Dialog

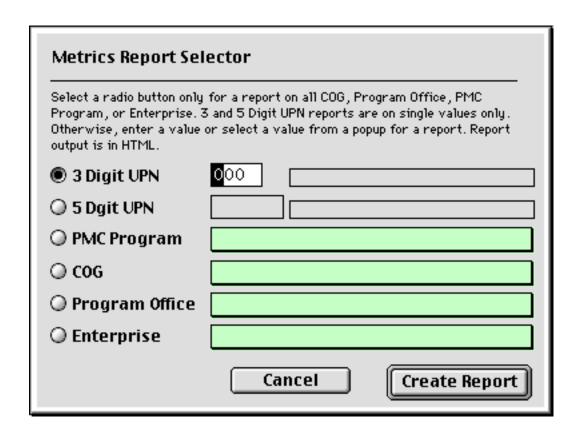
Section: 008.03.06 Reports

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Metrics Report Printed to Disk

The metrics report printed to disk is also available from the Choose Report Layout(s) dialog after choosing Print. The metrics report options available are displayed in the Metrics Report Selector dialog. Ouput options include:

3 Digit UPN
5 Digit UPN
PMC Program
COG
Program Office
Enterprise



The metrics report is printed to your local harddrive as an html document that can be viewed in a web browser or opened with Microsoft Excel.

Calculations

Major commercialization metric calculations areas include:

Activities NTRs Partnerships Success Stories

NOTE: The following calculations are for "Center_Total" metrics. Notes are included for other calculation types.

Section: 008.03.07 **Calculations**

Activities

Metric: **Extramural CY Obs**

Step 1: Query [Inventory] where

[Inventory]CY Obs > 0

[Inventory]CY Cost > 0

Note: For all other metric calculations, perform com_QuerySelectionInventory.

Calc: [Commercialization Metrics] Extramural_Count = Records in selection of [Inventory] from Metric: Extramural CY Obs-Step1.

Calc: [Commercialization Metrics] Extramural CY OBS = Sum of [Inventory] CY Obs from Metric: Extramural CY Obs-Step1.

Percent Yes Potential CY OBS Metric:

Step 1: Query Selection of [Inventory] records from Step1:Extramural CY Obs where

[Inventory]Commrcl Assess = "Y"

Note: For all other metric calculations, perform com_QuerySelectionInventory.

Calc: [Commercialization Metrics]Yes_Potential_Count = Records in selection of [Inventory] from *Metric:Percent Yes Potential CY OBS-Step1*.

Calc: [Commercialization Metrics]Yes_Potential_CY_OBS = Sum of [Inventory]CY Obs from Metric:Percent Yes Potential CY OBS-Step1.

Calc: [Commercialization Metrics]Percent_Yes_Potential_CY_OBS = [Commercialization Metrics Yes_Potential_CY_OBS divided by [Commercialization Metrics Extramural CY OBS times 100

Metric: Percent No Potential CY OBS

Step 1: Query Selection of [Inventory] records from *Metric:Extramural CY Obs-Step1* where [Inventory]Commrcl Assess = "N"

Note: For all other metric calculations, perform com_QuerySelectionInventory.

Calc: [Commercialization Metrics]No_Potential_Count = Records in selection of [Inventory] from *Metric:Percent No Potential CY OBS-Step1*.

Calc: [Commercialization Metrics]No_Potential_CY_OBS = Sum of [Inventory]CY Obs from *Metric:Percent No Potential CY OBS-Step1*.

Calc: [Commercialization Metrics]Percent_No_Potential_CY_OBS = [Commercialization Metrics]No_Potential_CY_OBS divided by [Commercialization Metrics]Extramural CY OBS times 100

Metric: Percent Unknown Potl CY OBS

Step 1: Query Selection of [Inventory] records from *Metric:Extramural CY Obs-Step1* where

[Inventory]Commrcl Assess not equal to "Y" and

[Inventory]Commrcl Assess not equal to "N"

Note: For all other metric calculations, perform com_QuerySelectionInventory.

Calc: [Commercialization Metrics]Unknown_Potential_Count = Records in selection of [Inventory] from *Metric:Percent Unknown Potl CY OBS-Step1*.

Calc: [Commercialization Metrics]Unknown_Potential_CY_OBS = Sum of [Inventory]CY Obs from *Metric:Percent Unknown Potl CY OBS-Step1*.

Calc: [Commercialization Metrics]Percent Yes Potential CY OBS = [Commercialization Metrics]Unknown_Potential_CY_OBS divided by [Commercialization Metrics]Extramural_CY_OBS times 100

Section: 008.03.07 Calculations

Metric: Total Activities Count

Step 1: Relate [Inventory] records from *Metric:Extramural CY Obs-Step1* to [Contract_Grant].

Note: For all other metric calculations, perform com_QuerySelectionContract.

Calc: [Commercialization Metrics]Total_Activities_Count = Records in selection of [Contract_Grant] from *Metric:Total Activities Count-Step 1*.

Metric: Activities with Clause Count

Step 1: Query Selection of [Contract_Grant] records from *Metric:Total Activities Count-Step 1* where

[Contract_Grant]NewTechnology Clause = True

or
[Contract_Grant]PR Retention by Grantee = True

or
[Contract_Grant]PR Retention by Contractor = True

or
[Contract_Grant]Reporting Obligations = True

or
[Contract_Grant]Contract Number = ncc@

or
[Contract_Grant]Contract Number = nca@

or
[Contract_Grant]Contract Number = nag@

or
[Contract_Grant]Service_Product = a@

or
[Contract_Grant]Kind of Contract or Grant = sbir@

or
[Contract_Grant]Kind of Contract or Grant = sttr@

Note: For all other metric calculations, perform com_QuerySelectionContract.

Calc: [Commercialization Metrics] Activities_with_Clause_Count = Records in selection of [Contract_Grant] from *Metric:Activities with Clause Count-Step 1*.

Metric: Percent Reporting

Step 1: Query Selection of [Contract_Grant] records from *Metric:Activities with Clause Count-Step 1* where

[Contract_Grant]Date Awarded <= (one year ago from end of metric month) and

[Contract_Grant]Date Ending >= (end of metric month)

Note: For all other metric calculations, perform com_QuerySelectionContract.

Calc: [Commercialization Metrics]Contract_Reports_Due = Records in selection of [Contract_Grant] from *Metric:Activities with Clause Count-Step 1*.

- **Step 2:** Relate [Contract_Grant] records from *Metric:Percent Reporting-Step 1* to [Contract Reports].
- **Step 3:** Query Selection of [Contract Reports] records from *Metric:Percent Reporting-Step 2* where

[Contract Reports]Report Date >= (one year ago from end of metric month) and [Contract Reports]Report Date <= (end of metric month)

Step 4: Relate [Contract Reports] records from *Metric:Percent Reporting-Step 3* to [Contract_Grant].

Calc: [Commercialization Metrics]Contract_Reports_Received = Records in selection of [Contract_Grant] from *Metric:Percent Reporting-Step 4*.

Calc: [Commercialization Metrics]Percent_Reporting = [Commercialization Metrics]Contract_Reports_Received divided by [Commercialization Metrics]Contract_Reports_Duev times 100

Section: 008.03.07 Calculations

Metric: Percent with NTRs

Step 1: Query Selection of [Contract_Grant] records from *Metric:Activities with Clause Count-Step 1* where

[Contract Grant]Commercial Potential=True

Note: For all other metric calculations, perform com_QuerySelectionContract.

Calc: [Commercialization Metrics]Activities_w_Clause_Potential = Records in selection of [Contract_Grant] from *Metric:Percent with NTRs-Step 1*.

- **Step 2:** Relate selection of [Contract_Grant] records from *Metric:Percent with NTRs-Step 1* to [Technology].
- **Step 3:** Query selection of [Technology] records from *Metric:Percent with NTRs-Step 2* where the [Technology]Case Number is valid.

For ARC, [Technology]Case Number = "ARC@"

For DFRC, [Technology]Case Number = "DRC@"

For GSFC, [Technology]Case Number = "GSC@"

For HON, [Technology]Case Number = "HON@"

For KSC, [Technology]Case Number = "KSC@"

For GRC, [Technology]Case Number = "LEW@"

For LaRC, [Technology]Case Number = "LAR@"

For MSFC, [Technology]Case Number = "MFS@"

For JSC, [Technology]Case Number = "MSC@"

For JPL, [Technology]Case Number = "NPO@" or [Technology]Case Number = "JPL@"

For SSC, [Technology]Case Numbe r= "SSC@"

Note: For all other metric calculations, perform com_QuerySelectionTechProg.

Calc: [Commercialization Metrics] Valid_Extramural_NTRs = Records in selection of [Technology] from *Metric:Percent with NTRs-Step 3*.

Note: For all other metric calculations, [Commercialization Metrics]Valid_Extramural_NTRs = Records in selection of [Tech Program Areas] from *Metric:Percent with NTRs-Step 3*.

Step 4: Relate selection of [Technology] records from *Metric:Percent with NTRs-Step 3* to [Contract_Grant].

Calc: [Commercialization Metrics] Activities_with_NTRs = Records in selection of [Technology] from *Metric:Percent with NTRs-Step 4*.

Calc: [Commercialization Metrics]Percent_with_NTRs = [Commercialization Metrics]Activities_with_NTRs divided by [Commercialization Metrics]Activities_w_Clause_Potential times 100

Section: 008.03.07 Calculations

NTRs ("Center_Total")

Metric: FY Extramural NTRs

Step 1: Query [Technology] where

[Technology];[Technology]Report As is not equal to "GE"

and

[Technology]Submit to HQ = True

and

[Technology]NTR Received Date >= Start of Fiscal Year

and

[Technology]NTR Received Date <= End of Metric Month

Step 2: Query selection of [Technology] records from *Metric:FY Extramural NTRs-Step 1* where the [Technology]Case Number is valid.

Note: For all other metric calculations, perform com_QuerySelectionTechProg.

Calc: [Commercialization Metrics]FY_Extramural_NTRs = Records in selection of [Technology] from *Metric:FY Extramural NTRs-Step 2*.

Note: For all other metric calculations, [Commercialization Metrics]FY_Extramural_NTRs = Records in selection of [Tech Program Areas] from *Metric:FY Extramural NTRs-Step 2*.

Metric: Total Extramural NTRs

Step 1: Query [Technology] where

[Technology];[Technology]Report As is not equal "GE"

and

[Technology]Submit to HQ = True

and

[Technology]NTR Received Date >= 5 Yrs Ago from End of Metric Month

and

[Technology]NTR Received Date <= End of Metric Month

Step 2: Query selection of [Technology] records from *Metric:Total Extramural NTRs-Step 1* where the [Technology]Case Number is valid.

Note: For all other metric calculations, perform com_QuerySelectionTechProg.

Calc: [Commercialization Metrics]Extramural_5_Yr_NTRs = Records in selection of [Technology] from *Metric:Total Extramural NTRs-Step 2*.

Note: For all other metric calculations, [Commercialization Metrics]Extramural_5_Yr_NTRs = Records in selection of [Tech Program Areas] from *Metric:Total Extramural NTRs-Step 2*.

Step 3: Perform a Union between the selection of [Technology] records from *Metric:Percent with NTRs-Step 3* and selection of [Technology] records from *Metric:Total Extramural NTRs-Step 2*.

Note: For all other metric calculations, Perform a Union between the selection of [Tech Program Areas] records from *Metric:Percent with NTRs-Step 2* and selection of [Tech Program Areas] records from *Metric:Total Extramural NTRs-Step 2*.

Calc: [Commercialization Metrics]Total_Extramural_NTRs = Records in selection of [Technology] from *Metric:Total Extramural NTRs-Step 3*.

Note: For all other metric calculations, [Commercialization Metrics]Total_Extramural_NTRs = Records in selection of [Tech Program Areas] from *Metric:Total Extramural NTRs-Step 3*.

Section: 008.03.07 Calculations

Metric: FY Intramural NTRs

Step 1: Query [Technology] where

[Technology]Report As = "GE"

and
[Technology]Submit to HQ = True

and
[Technology]Contract Number = ""

and
[Technology]NTR Received Date >= Start of Fiscal Year

and

Step 2: Query selection of [Technology] records from *Metric:FY Intramural NTRs-Step 1* where the [Technology]Case Number is valid.

[Technology]NTR Received Date <= End of Metric Month

Note: For all other metric calculations, perform com_QuerySelectionTechProg.

Calc: [Commercialization Metrics]Total_Intramural_NTRs = Records in selection of [Technology] from *Metric:FY Intramural NTRs-Step 2*.

Note: For all other metric calculations, [Commercialization Metrics]Total_Intramural_NTRs = Records in selection of [Tech Program Areas] from *Metric:FY Intramural NTRs-Step 2*.

Metric: Total Intramural NTRs

Step 1: Query [Technology] where

[Technology]Report As = "GE"

and

[Technology]Submit to HQ = True

and

[Technology]Contract Number = ""

and

[Technology]NTR Received Date >= 5 Yrs Ago from End of Metric Month

and

[Technology]NTR Received Date <= End of Metric Month

Step 2: Query selection of [Technology] records from *Metric:Total Intramural NTRs-Step 1* where the [Technology]Case Number is valid.

Note: For all other metric calculations, perform com_QuerySelectionTechProg.

Calc: [Commercialization Metrics]Intramural_5_Yr_NTRs = Records in selection of [Technology] from *Metric:Total Intramural NTRs-Step 2*.

Note: For all other metric calculations, [Commercialization Metrics]Extramural_5_Yr_NTRs = Records in selection of [Tech Program Areas] from *Metric:Total Intramural NTRs-Step 2*.

Section: 008.03.07 Calculations

Metric: Total FY NTRs

Step 1: Perform a Union between the selection of [Technology] records from *Metric:FY Extramural NTRs-Step 2* and selection of [Technology] records from *Metric:FY Intramural NTRs-Step 2*.

Note: For all other metric calculations, perform a Union between the selection of [Tech Program Areas] records from *Metric:FY Extramural NTRs-Step 2* and selection of [Tech Program Areas] records from *Metric:FY Intramural NTRs-Step 2*.

Calc: [Commercialization Metrics]Total_FY_NTRs = Records in Selection of [Technology] from *Metric:Total Active NTRs-Step 1*.

Note: For all other metric calculations, [Commercialization Metrics]Total_FY_NTRs = Records in selection of [Tech Program Areas] from *Metric:Total Active NTRs-Step 1*.

Alternate Calculation for Total Active NTRs

Calc: [Commercialization Metrics]Total_FY_NTRs = [Commercialization Metrics]FY_Extramural_NTRs + [Commercialization Metrics]FY_Intramural_NTRs

Metric: Total Active NTRs

Step 1: Perform a Union between the selection of [Technology] records from *Metric:Total Intramural NTRs-Step 2* and selection of [Technology] records from *Metric:Total Extramural NTRs-Step 2*.

Note: For all other metric calculations, perform a Union between the selection of [Tech Program Areas] records from *Metric:Total Intramural NTRs-Step 2* and selection of [Tech Program Areas] records from *Metric:Total Extramural NTRs-Step 2*.

Calc: [Commercialization Metrics]Total_Active_NTRs = Records in Selection of [Technology] from *Metric:Total Active NTRs-Step 1*.

Note: For all other metric calculations, [Commercialization Metrics]Total_Active_NTRs = Records in selection of [Tech Program Areas] from *Metric:Total Active NTRs-Step 1*.

Alternate Calculation for Total Active NTRs

Calc: [Commercialization Metrics]Total_Active_NTRs = [Commercialization Metrics]Total_Extramural_NTRs + [Commercialization Metrics]Total_Intramural_NTRs

Section: 008.03.07 Calculations

Metric: NTRs Available to Public

Step 1: Query selection of [Technology] records from *Metric:Total Active NTRs-Step 1* where

[Technology]Release to Public="Y"

Note: For all other metric calculations, perform com_QuerySelectionTechProg.

Calc: [Commercialization Metrics]NTRs_Available_to_Public = Records in Selection from *Metric:NTRs Available to Public-Step 1*.

Note: For all other metric calculations, [Commercialization Metrics]NTRs_Available_to_Public = Records in selection of [Tech Program Areas] from *Metric:NTRs Available to Public-Step 1*.

Metric: Pct NTRs Available to Public

Calc: [Commercialization Metrics]Pct_NTRs_Available_to_Public = [Commercialization Metrics]NTRs_Available_to_Public divided by [Commercialization Metrics]Total_Active_NTRs times 100

Partnerships ("Center_Total")

Metric: Partnerships Count

Step 1: Query [Partnerships] where

[Partnerships]GPRA Qualified=True

and

[Partnerships]Date Awarded <= End of Metric Month

and

[Partnerships]Date Ending >= Start of Fiscal Year

Step 2: Query [Partnerships] where

[Partnerships]GPRA Qualified = True

and

[Partnerships]NASA Total Investment Curnt > 0

and

[Partnerships]Date Awarded <= End of Metric Month

Step 3: Union records from *Metric:Partnerships Count-Step 1* and *Metric:Partnerships Count-Step 2*.

Note: For all other metric calculations, perform com_QuerySelectionPartnerships.

Calc: [Commercialization Metrics]Partnerships_Count = Records in Selection from *Metric:Partnerships Count-Step 3*.

Metric: NASA Partnership Investment

Step 1: Query selection of [Contract_Grant] from *Metric:Total Activities Count-Step 1* where

[Contract Grant]Contract Number = ncc@

 \mathbf{or}

[Contract_Grant]Contract Number = nag@

or

[Contract_Grant]Contract Number = nca@

or

[Contract_Grant]Service_Product = a@

or

[Contract Grant]Kind of Contract or Grant = sbir@

or

[Contract_Grant]Kind of Contract or Grant = sttr@

Note: For all other metric calculations, perform com_QuerySelectionContract.

Calc: [Commercialization Metrics]R_and_D_Activities_Count = Records in Selection of [Contract_Grant] from *Metric:NASA Partnership Investment-Step 1*.

Step 2: Relate selection of [Contract_Grant] from to [Inventory].

Note: For all other metric calculations, perform com_QuerySelectionInventory.

Calc: [Commercialization Metrics]R_and_D_Base = Sum of [Inventory]CY Obs from *Metric:NASA Partnership Investment-Step 2.*

- **Step 3:** Relate selection of [Partnerships] records from *Metric:Partnerships Count-Step 3* to [Partnership Program Number].
- **Step 4:** Relate selection of [Partnership Program Number] records to [Partnership Program Number FY].
- **Step 5:** Query selection of [Partnership Program Number FY] where

[Partnership Program Number FY]FY = Fiscal Year

Calc: [Commercialization Metrics]NASA_Partnership_Investment = Sum of [Partnership Program Number FY]NASA Total Contribution

Calc: [Commercialization Metrics]Partnership_Percentage = [Partnership Program Number FY]NASA Total Contribution divided by [Commercialization Metrics]R and D Base times 100

Success Stories ("Center_Total")

Metric: Public Success Stories

Step 1: If [Success Story]PDF is equal to True, then query [Success Story] where

```
[Success Story]Title not equal to ""
and
[Success Story]Release to Public = True
and
[Success Story]Public Release Date <= End of Metric Month
[Success Story]Company Code # 0
and
[Company]Name not equal to ""
and
[Company]POP City not equal to ""
and
[Company]POP State not equal to ""
[Company]POP Zip not equal to ""
[Success Story]Center not equal to ""
and
[Success Story]NASA POC People Code not equal to 0
```

Else query [Success Story] where

```
[Success Story]Title not equal to ""

and

[Success Story]Release to Public = True

and

[Success Story]Public Release Date <= End of Metric Month

and

[Success Story]Company Code # 0

and

[Company]Name not equal to ""

and

[Company]POP City not equal to ""

and

[Company]POP State not equal to ""

and
```

[Company]POP Zip not equal to ""

and
[Success Story]Center not equal to ""

and
[Success Story]Commercial Application not equal to ""

and
[Success Story]Social_Economic Benefit not equal to ""

and

[Success Story]NASA POC People Code not equal to 0

- **Step 2:** Relate [Success Story] to [KeySuccess].
- **Step 3:** Relate [KeySuccess] to [Success Story].
- **Step 4:** Union selection of [Success Story] records from *Metric:Public Success Stories-Step 1* with [Success Story] records from *Metric:Public Success Stories-Step 3*.

Note: For all other metric calculations, perform com_QuerySelectionSuccessProgAr.

Calc: [Commercialization Metrics]Public_Success_Stories = records in selection of [Success Story] from *Metric:Public Success Stories-Step 4*.

Note: For all other metric calculations, [Commercialization Metrics]Public_Success_Stories = Records in selection of [Success Story Program Areas] from *Metric:Public Success Stories-Step 4*.

Metric: FY Public Success Stories

Step 1: Query selection of [Success Story] records from *Metric:Public Success Stories-Step 4* where

[Success Story]Public Release Email Date >= Start of Fiscal Year

Note: For all other metric calculations, perform com_QuerySelectionSuccessProgAr.

Calc: [Commercialization Metrics]FY_Public_Success_Stories = records in selection of [Success Story] from *Metric:FY Public Success Stories-Step 1*.

Note: For all other metric calculations, [Commercialization Metrics]Public_Success_Stories = Records in selection of [Success Story Program Areas] from *Metric:FY Public Success Stories-Step 1*.

Appendix A

Please refer to the following routines when calculating metrics other than "Center_Total":

```
com_QuerySelectionContract
com_QuerySelectionInventory
com_QuerySelectionTechProg
com_QuerySelectionPartnerships
com_QuerySelectionSuccessProgAr
```

com_QuerySelectionContract

com_QuerySelectionContract queries the selection of [Contract_Garnt] based on the caclulation type.

```
$Area = Progarm Area Value
$Calculation = Calculation Type
Case of
 : ($Calculation="3_Digit_UPN")
  QUERY SELECTION([Contract_Grant];[Contract_Grant]Program_Number=$Area+"@";*)
  QUERY SELECTION([Contract_Grant]; & ;[Contract_Grant]Program_Number_Type # "F")
 : ($Calculation="5_Digit_UPN")
  QUERY SELECTION([Contract_Grant];[Contract_Grant]Program_Number=$Area)
 : ($Calculation="COG")
  QUERY SELECTION([Contract_Grant];[Contract_Grant]COG=$Area)
 : ($Calculation="PMC_Program")
  QUERY SELECTION([Contract_Grant];[Contract_Grant]PMC_Program=$Area)
 : ($Calculation="Program_Office")
  QUERY SELECTION([Contract_Grant];[Contract_Grant]Program_Office=$Area)
 : ($Calculation="Enterprise")
  QUERY SELECTION([Contract_Grant];[Contract_Grant]Enterprise=$Area)
End case
```

com_QuerySelectionInventory

com_QuerySelectionInventory queries the selection of [Inventory] based on the caclulation type.

```
$Area = Progarm Area Value
$Calculation = Calculation Type
Case of
 : ($Calculation="5 Digit UPN")
  QUERY SELECTION([Inventory]; [Inventory] 5 Digit UPN=$Area)
 : ($Calculation="3_Digit_UPN")
  QUERY SELECTION([Inventory]; [Inventory] 3 Digit UPN=$Area)
 : ($Calculation="COG")
  QUERY SELECTION([Inventory]; [Program Code]COG=$Area)
 : ($Calculation="Program_Office")
  QUERY SELECTION([Inventory]; [Inventory] Program Office=$Area)
 : ($Calculation="PMC Program")
  QUERY SELECTION([Inventory];[Program Code]PMC_Program=$Area)
 : ($Calculation="Enterprise")
  Case of
   : ($Area="HEDS")
    QUERY SELECTION([Inventory];[Inventory]Program Office="3";*)
    QUERY SELECTION([Inventory]; | ; [Inventory]Program Office="9")
    : ($Area="ES")
    QUERY SELECTION([Inventory]; [Inventory] Program Office="A")
    QUERY SELECTION([Inventory]; [Inventory] Program Office="8")
   : ($Area="AST")
    QUERY SELECTION([Inventory]; [Inventory] Program Office="7")
    : ($Area="FPA")
    QUERY SELECTION([Inventory]; [Inventory] Program Office="0";*)
    QUERY SELECTION([Inventory]; | ; [Inventory]Program Office="1";*)
    QUERY SELECTION([Inventory]; | ; [Inventory]Program Office="2";*)
    QUERY SELECTION([Inventory]; | ;[Inventory]Program Office="5")
  End case
End case
```

com_QuerySelectionTechProg

com_QuerySelectionTechProg queries the selection of [Tech Program Areas] based on the caclulation type.

```
$Area = Progarm Area Value
$Calculation = Calculation Type
RELATE MANY SELECTION([Tech Program Areas]Case Number)
Case of
 : ($Calculation="3_Digit_UPN")
  QUERY SELECTION([Tech Program Areas]; [Tech Program Areas]Program Number=$Area+"@";*)
  QUERY SELECTION([Tech Program Areas]; & ;[Tech Program Areas]Program_Number_Type # "F")
 : ($Calculation="5_Digit_UPN")
  QUERY SELECTION([Tech Program Areas]; [Tech Program Areas] Program_Number=$Area)
 : ($Calculation="COG")
  QUERY SELECTION([Tech Program Areas]; [Tech Program Areas] COG=$Area)
 : ($Calculation="PMC Program")
  QUERY SELECTION([Tech Program Areas]; [Tech Program Areas]PMC_Program=$Area)
: ($Calculation="Program Office")
  QUERY SELECTION([Tech Program Areas];[Tech Program Areas]Program_Office=$Area)
 : ($Calculation="Enterprise")
  QUERY SELECTION([Tech Program Areas];[Tech Program Areas]Enterprise=$Area)
End case
CREATE SET([Tech Program Areas];"RelatedSet")
RELATE ONE SELECTION([Tech Program Areas];[Technology])
If (Records in selection([Tech Program Areas])>0)
CREATE EMPTY SET([Tech Program Areas];"TPA")
For ($i;1;Records in selection([Technology]))
   `RELATE MANY SELECTION([Tech Program Areas]Case Number)
  QUERY([Tech Program Areas]; [Tech Program Areas]Case Number=[Technology]Case Number)
  CREATE SET([Tech Program Areas];"temp")
  INTERSECTION("RelatedSet";"temp";"TestSet")
  USE SET("TestSet")
  QUERY SELECTION([Tech Program Areas]; [Tech Program Areas] Calculated=False) `take out caclulated records
  If (Records in selection([Tech Program Areas])>0)
   ADD TO SET([Tech Program Areas];"TPA")
  Else
   USE SET("TestSet")
   ADD TO SET([Tech Program Areas];"TPA")
  NEXT RECORD([Technology])
```

End for

USE SET("TPA")

CLEAR SET("TPA")
CLEAR SET("temp")
CLEAR SET("RelatedSet")
CLEAR SET("TestSet")

End if

com_QuerySelectionPartnerships

com_QuerySelectionPartnerships queries the selection of [Partnerships] based on the caclulation type.

```
$Area = Progarm Area Value
$Calculation = Calculation Type
Case of
 : ($Calculation="3_Digit_UPN")
  QUERY SELECTION([Partnerships];[Partnerships]Program_Number=$Area+"@";*)
  QUERY SELECTION([Partnerships]; & ;[Partnerships]Program_Number_Type # "F")
 : ($Calculation="5_Digit_UPN")
  QUERY SELECTION([Partnerships];[Partnerships]Program_Number=$Area)
 : ($Calculation="COG")
  QUERY SELECTION([Partnerships];[Partnerships]COG=$Area)
 : ($Calculation="PMC_Program")
  QUERY SELECTION([Partnerships];[Partnerships]PMC_Program=$Area)
: ($Calculation="Program_Office")
  QUERY SELECTION([Partnerships];[Partnerships]Program_Office=$Area)
: ($Calculation="Enterprise")
  QUERY SELECTION([Partnerships];[Partnerships]Enterprise=$Area)
End case
```

com_QuerySelectionSuccessProgAr

com_QuerySelectionSuccessProgAr queries the selection of [Success Story Program Areas] based on the caclulation type.

```
$Area = Progarm Area Value
$Calculation = Calculation Type
RELATE MANY SELECTION([Success Story Program Areas]Success Story ID)
Case of
 : ($Calculation="3_Digit_UPN")
  QUERY SELECTION([Success Story Program Areas];[Success Story Program Areas]Program_Number=$Area+"@";*)
  QUERY SELECTION([Success Story Program Areas]; & ;[Success Story Program
Areas]Program_Number_Type # "F")
 : ($Calculation="5_Digit_UPN")
  QUERY SELECTION([Success Story Program Areas];[Success Story Program Areas]Program_Number=$Area)
 : ($Calculation="COG")
  QUERY SELECTION([Success Story Program Areas];[Success Story Program Areas]COG=$Area)
 : ($Calculation="PMC_Program")
  QUERY SELECTION([Success Story Program Areas];[Success Story Program Areas]PMC_Program=$Area)
 : ($Calculation="Program_Office")
  QUERY SELECTION([Success Story Program Areas];[Success Story Program Areas]Program_Office=$Area)
 : ($Calculation="Enterprise")
  QUERY SELECTION([Success Story Program Areas];[Success Story Program Areas]Enterprise=$Area)
End case
CREATE SET([Success Story Program Areas];"RelatedSet")
RELATE ONE SELECTION([Success Story Program Areas];[Success Story])
If (Records in selection([Success Story Program Areas])>0)
 CREATE EMPTY SET([Success Story Program Areas];"TPA")
 For ($i;1;Records in selection([Success Story]))
  QUERY([Success Story Program Areas];[Success Story Program Areas]Success Story ID=[Success Story]ID)
  CREATE SET([Success Story Program Areas];"temp")
  UNION("RelatedSet";"temp";"TestSet")
  USE SET("TestSet")
  QUERY SELECTION([Success Story Program Areas];[Success Story Program Areas]Calculated=False) `take out
caclulated records
  If (Records in selection([Success Story Program Areas])>0)
   ADD TO SET([Success Story Program Areas];"TPA")
  Else
   USE SET("TestSet")
   ADD TO SET([Success Story Program Areas];"TPA")
  End if
```

NEXT RECORD([Success Story])
End for

USE SET("TPA")

CLEAR SET("TPA")

CLEAR SET("temp")

CLEAR SET("RelatedSet")

CLEAR SET("TestSet")

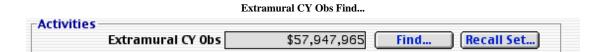
End if

Find Button Section: 008.03.08

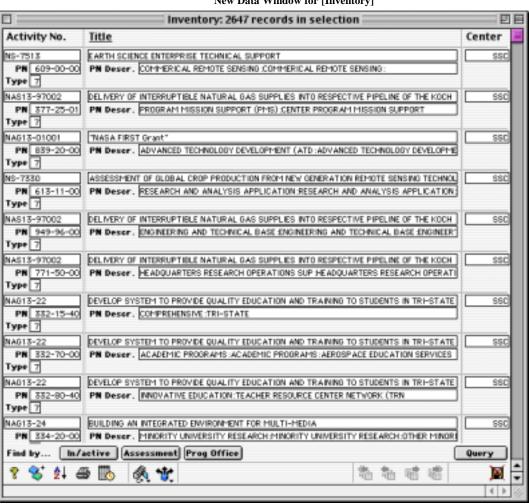
Find... Button

The *Find...* button for Commerialization Metrics is used to locate the current records for a particular metric. The *Find...* ONLY finds the current Center_Total set of records. Sets are created and a new data window is opened when the *Find...* is clicked.

For example, when the user clicks on the *Find*... button for Extramural CY Obs



a new data window is opened in the [Inventory] table.

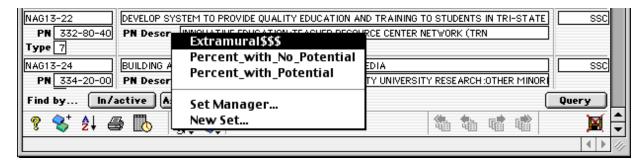


New Data Window for [Inventory]

Section: 008.03.08 Find Button

A set is created and is available from the Sets popup.

Extramural Set - Extramural \$\$\$

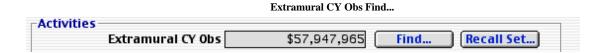


Recall Set Button Section: 008.03.09

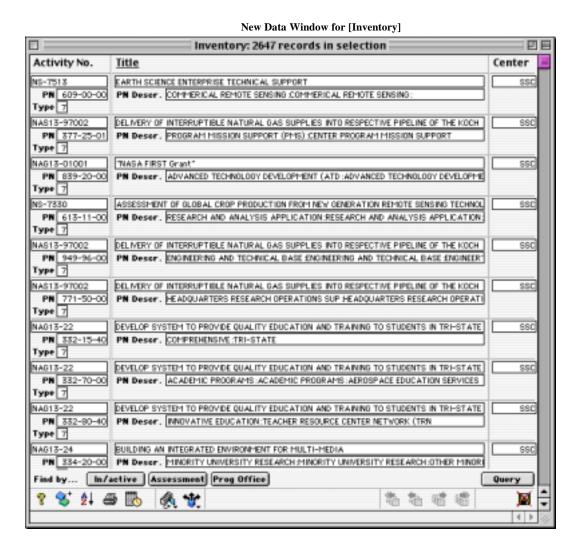
Recall Set Button

The *Recall Set...* button for Commerialization Metrics is used to locate the saved set of records for a particular metric. The *Recall Set...* ONLY finds the saved set for the most recent Center_Total calculation. Sets are created and a new data window is opened when the *Recall Set...* is clicked.

For example, when the user clicks on the *Recall Set...* button for Extramural CY Obs



a new data window is opened in the [Inventory] table.

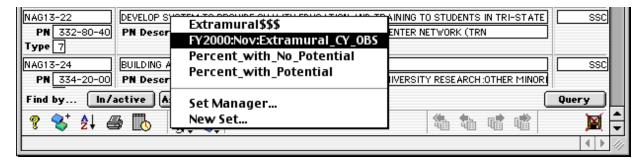


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Section: 008.03.09 Recall Set Button

A set is created and is available from the Sets popup.

Extramural Set - FY2000:Sep:Extramural_Cy_Obs



Assistance Metrics Section: 008.04

Assistance Metrics

Assistance metrics are automatically calculated twice a month, before and after the FACS procurement data load. The FACS load normally occurs after the 15th of each month.

Assistance metrics are calculated for every NASA assistance partner that exists in 4D non-modifiable list for Partnerships and Success Stories. The [Partnership_Assistance] table contain the assistance information for [Partnerships] and data entry is located on the Success Stories/Technologies screen. The [Success_Story_Assist] can be found on the Ecnonomic Data, Preparer, etc. screen.

Note: If you need to add entries to the Assistance list, please contact your DBA.



List Screen Section: 008.04.01

List Screen

The listing screen contains the following fields:

[Assistance_Metrics]Fiscal_Year

[Assistance_Metrics]Month (shown as month spelled out)

[Assistance_Metrics]Center

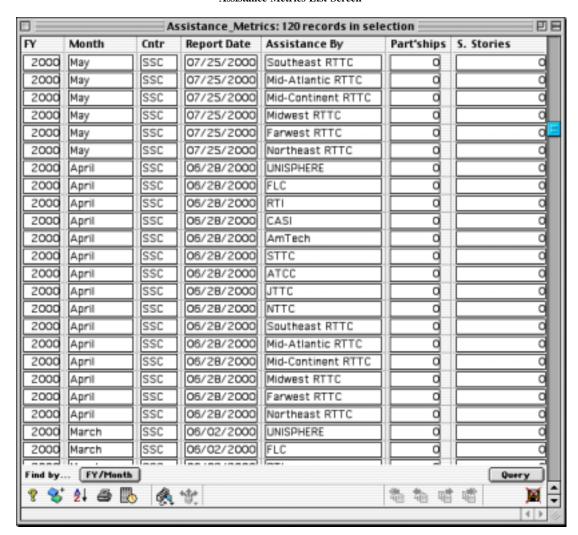
[Assistance_Metrics]Report_Date

[Assistance_Metrics]Assistance_By

[Assistance_Metrics]Partnerships

[Assistance_Metrics]Success_Stories

Assistance Metrics List Screen



Section: 008.04.01 List Screen

Find

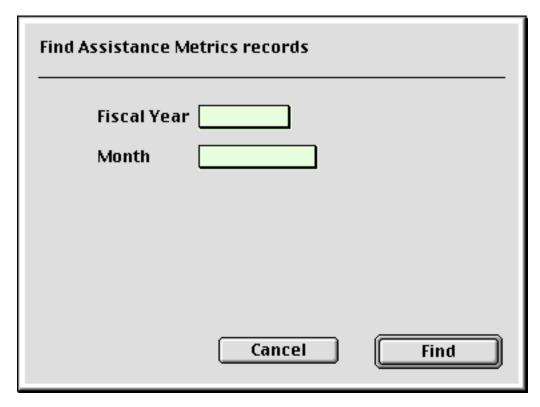
To activate the find window, locate the find option from one of these locations:

- Find... from the Query icon on the listing window
- Find... from menu Select --> Find...
- Query Icon from the main menu

After the Find window is displayed, choose values from one or more of the following popups:

- Fiscal Year
- Month

Assistance Metrics Find Window



General Information Section: 008.04.02

General Information

The data window for [Assistance_Metrics] a single screen - General Information. The data window contains the following fields:

[Assistance_Metrics]Fiscal_Year

[Assistance_Metrics]Month (shown as month spelled out)

[Assistance_Metrics]Center

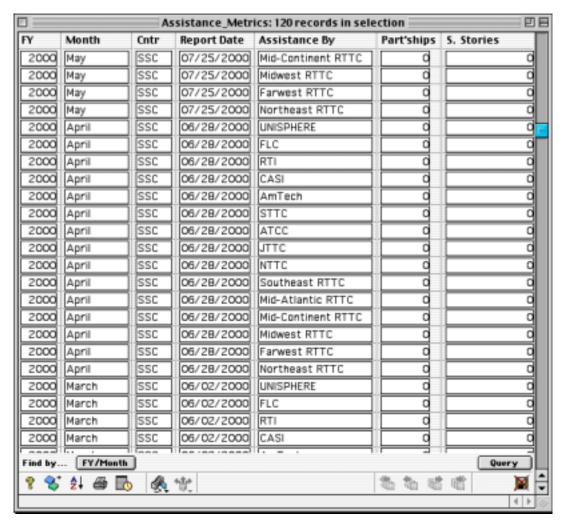
[Assistance_Metrics]Report_Date

[Assistance_Metrics]Assistance_By

[Assistance_Metrics]Partnerships

[Assistance_Metrics]Success_Stories

Assistance Metrics - General Information Screen



S	ection: 008.04.02	General Information

Program Area Asssignments

UPN assignments are calculated after every FACS data load. UPN assignments are calculated for the following tables:

[Contact_Grant]

[Partnerships]

[Success_Stories] - stored in the [Success_Stories_Areas] table.

[Technology] - stored in the [Tech_Program_Areas] table.

Calculations

UPN assignments are calculated after every FACS data load. UPN assignments are calculated for the following tables:

```
[Contact_Grant]
[Partnerships]
[Success_Stories] - stored in the [Success_Stories_Areas] table.
[Technology] - stored in the [Tech Program Areas] table.
```

[Contract_Grant]

For every record in the [Contract_Grant] table, the program area fields are assigned by examining the related [Inventory]CY_Obs plus the [Inventory]PY_Obs to see if

- a single 5 digit UPN accounted for more than 50% of the funding. If not,
- a single 3 digit UPN accounted for more than 50% of the funding. If not,
- a single COG accounted for more than 50% of the funding. If not,
- a single PMC Program accounted for more than 50% of the funding. If not,
- a single Program Office accounted for more than 50% of the funding. If not,
- a single Enterprise accounted for more than 50% of the funding

[Partnerships]

For every record in the [Partnerships] table, the program area fields are assigned by examining the [Partnership_Program_Number_FY] to see if

- a single 5 digit UPN accounted for more than 50% of the funding. If not,
- a single 3 digit UPN accounted for more than 50% of the funding. If not,
- a single COG accounted for more than 50% of the funding. If not,
- a single PMC Program accounted for more than 50% of the funding. If not,
- a single Program Office accounted for more than 50% of the funding. If not,
- a single Enterprise accounted for more than 50% of the funding

[Success_Stories]

For every record in the [Success_Stories] table, a record is created/updated in the [Success_Story_Program_Areas] table and is assigned program area values from

- related [Contract_Grant] record. If one does not exist,
- related [Technology] record. If one does not exist,
- related [Partnerships] record.

[Technology]

For every record in the [Technology] table, a record is created/updated in the [Tech_Program_Areas] table and is assigned program area values from the related [Contract_Grant] record.